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United States  
Department of  
Agriculture

Soil  
Conservation  
Service

Spokane,  
Washington



# Water Supply Outlook for Washington

as of FEBRUARY 1, 1985





## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: "Snow scene along trail to Mt. Hood test site snow course"

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P.O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P.O. Box 98, Bozeman, Montana 59715
Nevada	P.O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4402 Federal Bldg., 125 South State St., Salt Lake City, Utah 84147
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P.O. Box 2440, Casper, Wyoming 82601

### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 — for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 — for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 — and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



# **WATER SUPPLY OUTLOOK FOR WASHINGTON**

and

**FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS**

ISSUED BY

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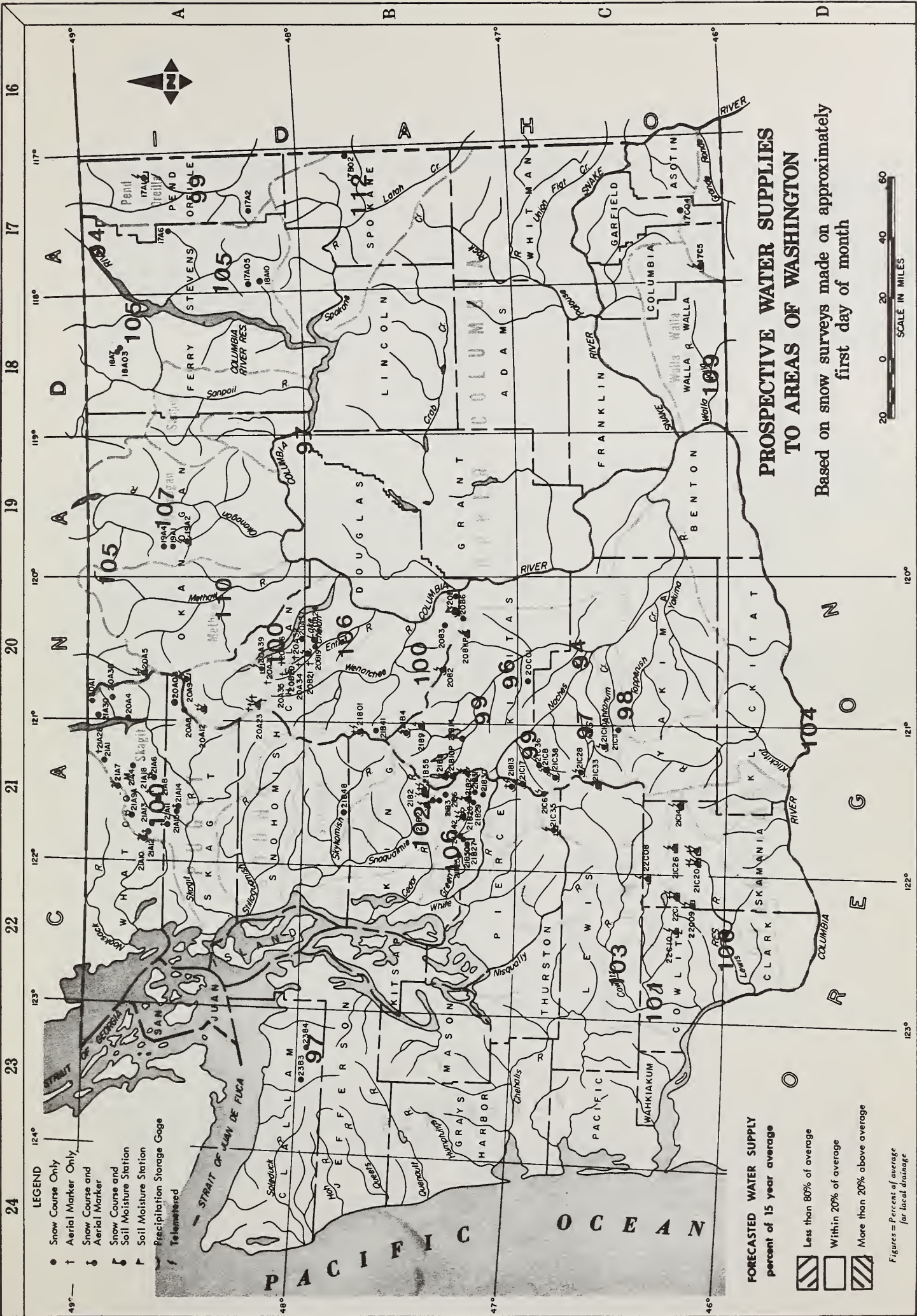
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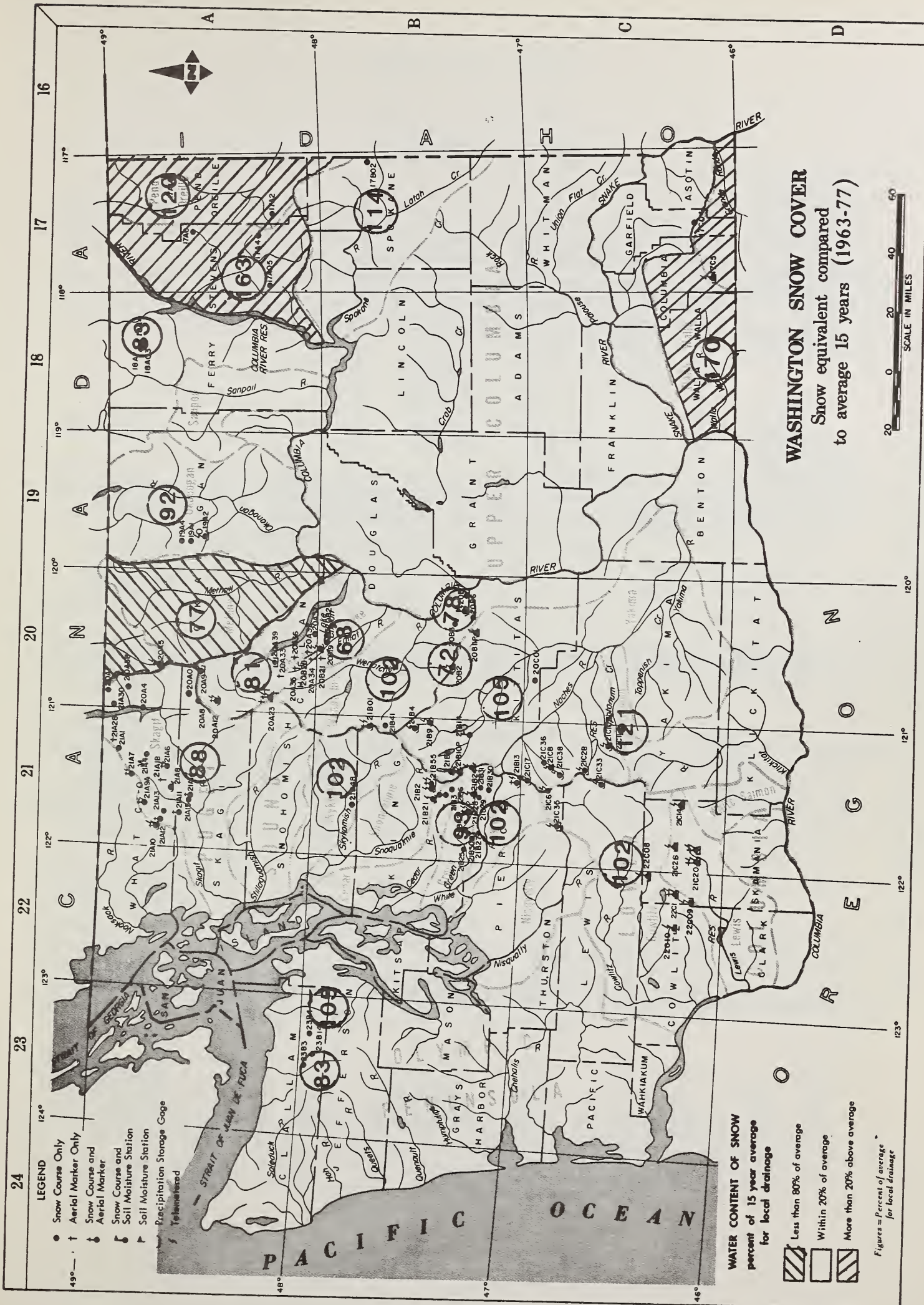




# INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Spokane River					
Rogged Ridge	17B02	12	27N	45E	3333
Colville River					
Beard	17A6	19	36N	42E	3215
Stranger Mountain	17A5	26	31N	38E	4990
Lega	18A10	6	29N	38E	3370
Okanogan River					
Multon Creek No. 1	19A1	30	37N	24E	5700
Multon Creek No. 2	19A4	19	37N	24E	6000
Salman Meadows	19A2SP	33	37N	24E	4500
Mehaw River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B25P	35	22N	17E	4270
Stevens Pass	21B15P	14	26N	13E	4070
Trough #2	20B25SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	9	15N	12E	4600
Bumping Ridge	21C38SP	28	24N	14E	3371
Fish Lake	21B45P	3	12N	13E	6000
Green Lake	21C10SP	3	12N	19E	5385
Grause Camp	20B11SP	29	21N	19E	5385
Lake Cle Elum	21B14M	15	20N	14E	2200
Morse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	21B8P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500
LOWER COLUMBIA DRAINAGE					
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cawiltz River					
Coyuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
Nisqually River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Corral Pass	21B13SP	30	18N	11E	6000
Green River					
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21B48	31	27N	9E	3500
Olallie Meadows	21B2P	19	22N	11E	3625
Olallie Meadows East	21B55SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Fork	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200
Baker River					
Dack Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Elwha River					
Hurricane	23B3	36	29N	7W	4500
LEGEND					
21A7	Snow Course Only				
21A7a	Aerial Marker Only				
21A7b	Snow Course And Aerial Marker Station				
21A7m	Snow Course And Soil Moisture Station				
21A7p	Snow Course And Precipitation Storage Gage				
21A7SP	Precipitation Storage Gage				
21A7SP	Snow Pillow				







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Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Kettle River					
Summit G. S.	18A7	20	39N	35E	4600
Butte Creek	18A3	28	39N	35E	4070
Goat Creek	18A4	26	39N	35E	3595
Spokane River					
Ragged Ridge	17802	12	27N	45E	3333
Colville River					
Baird	17A6	17	36N	42E	3215
Stranger Mountain	17A3	26	31N	38E	4990
Chewelah	17A4	11	32N	41E	4725
Okanogan River					
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Salmon Meadows	19A2SP	33	37N	24E	4500
Methow River					
Harts Pass	20A5SP	7	37N	18E	6500
Chelan Lake Basin					
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Brief	20819	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Fox Comp	20A36a	17	30N	18E	6510
Pope Ridge	20820	22	29N	18E	3540
Pope Ridge Snow Pillow					
Pope Ridge	20824SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20821a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek (New)	21841SP	13	26N	14E	3240
Blewett Pass No. 2	2082SP	35	22N	17E	4270
Stevens Pass	2181SP	14	26N	13E	4070
Trough #2	20825SP	10	20N	20E	5310
Squilchuck Creek					
Beehive Springs	2083	12	21N	19E	4400
Stemilt Creek					
Stemilt Slide	2086	30	21N	20E	5000
Upper Wheeler	2087SP	30	21N	20E	4400
Yakima River					
Ahanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	2189SP	35	23N	14E	3200
Bumping Lake	21C8P	23	12E	3450	
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Fish Lake	2184SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20811SP	29	21N	19E	5385
Lake Cle Elum	21814N	15	20N	14E	2200
Morse Lake	21C17SP	6	16N	11E	5400
Tunnel Avenue	2188P	13	21N	11E	2450
White Pass (East Side)	21C28SP	2	13N	11E	4500
LOWER COLUMBIA DRAINAGE					
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Touchet No. 2	17C5SP	6	7N	40E	5530
Lewis River					
June Lake	22C09SP	26	8N	5E	3700
Lane Pine Shelter	21C26SP	8	9N	7E	3800
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Spencer Meadow	21C20SP	16	8N	7E	3400
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Coyuse Pass	21C6	15	16N	10E	5300
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Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
White River					
Paradise Park (New)	21C35SP	13	15N	8E	5500
Green River					
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21825	27	21N	8E	1200
Caughr Mountain	21842SP	21	21N	9E	3200
Grass Mountain No. 2	21827	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Stampede Pass	21810 SP	25	21N	11E	3860
Twin Camp	21830	18	19N	11E	4100
Cedar River					
City Cabin	2183	10	21N	10E	2390
Mt. Gardner	21821P	30	22N	10E	3300
Snoqualmie River					
Alpine Meadow	21848	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
Olallie Meadows East	21855SP	20	22N	11E	3700
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200
Baker River					
Duck Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marion Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rackey Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	2384	1	28N	5W	5200
Elwha River					
Hurricane	2383	36	29N	7W	4500
Cox Valley					
	23814	31	29N	6W	4500
LEGEND					
21A7	Snow Course Only				
21A7a	Aerial Marker Only				
21A7A	Snow Course And Aerial Marker Station				
21A7M	Snow Course And Soil Moisture Station				
21A7P	Soil Moisture Station				
21A7SP	Snow Course And Precipitation Storage Gage				
21A7SP	Snow Pillow				

## WATER SUPPLY OUTLOOK

State of Washington

FEBRUARY 1, 1985

Water supply forecasts for Washington are expected to be average over the entire state. The forecasts vary from 94% on the Yakima River at Parker to 110% of normal runoff on the Methow River. The mountain snowpack was generally near average over most of Washington. Precipitation was near average over the state during last fall. Reservoir storage is fair for February 1. Streamflow for January was below average due to the below normal temperatures.

### SNOW COVER

Snow cover measured during the February 1st period is now showing slightly below average for the lower elevations in the cascades. The higher elevation snow courses in the cascades and the snow courses in the eastern portion of the state are near average to slightly above average.

### PRECIPITATION

January precipitation was below average over the state, with Northeastern Washington at 23%, Southeastern Washington at 19%, the Southwest Cascade at 4%, and the Okanogan area at 10%.

Precipitation during the November-January winter period has been below average over the entire state except the Northeastern Washington. During this period the Puget Sound area received 26.72 inches, 70% of normal. The Yakima area received 13.17 inches, 66% of normal. Precipitation in the Northeastern area was 106% of normal.

### RESERVOIR STORAGE

February 1 stored water supplies are fair to good within the irrigated sections of the state. The Yakima irrigation reservoirs are storing 504,104 acre feet of water compared to the February 1 average of 656,500, or 79% of normal. The reservoirs in the Okanogan Irrigation District are at capacity. Lake Chelan at 226,800 acre-feet, is 76% of normal.

### STREAMFLOW

Below normal January temperatures have retarded the snowmelt keeping stream flows low during the month over most of the state. Streams in the state having below average flows were the Pend Oreille River at 66%, Spokane River at 83%, Yakima River at 34% and the Wenatchee River at 42%.





# STREAMFLOW FORECASTS - FEBRUARY 1985

THE FOLLOWING SUMMARIZED RUNOFF FORECASTS ARE BASED PRINCIPALLY ON MOUNTAIN SNOW COVER AND ON THE ASSUMPTION THAT PRECIPITATION AND TEMPERATURE WILL BE NEAR AVERAGE FROM THE PRESENT TIME TO THE END OF THE FORECAST PERIOD. APPRECIABLE DEVIATIONS FROM NORMAL TEMPERATURE AND/OR PRECIPITATION WILL CORRESPONDINGLY MODIFY THESE FORECASTS. THESE FORECASTS ARE MADE AS A PRODUCT OF THE COOPERATIVE EFFORTS OF THE SOIL CONSERVATION SERVICE AND THE NATIONAL WEATHER SERVICE. STREAMFLOW FIGURES FOR 1982-1984 ARE PRELIMINARY AND SUBJECT TO REVISION.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET							
BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE- CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
COLUMBIA RIVER SYSTEM /1/							
COLUMBIA RIVER	42000	94	APR-SEPT	39200	43225	48575	44605
AT BIRCHBANK	33560	94	APR-JULY	30400	34569	38210	35705
	24465	94	APR-JUNE	20700	24281	27454	26027
COLUMBIA RIVER	65000	97	APR-SEPT	62500	46662	56425	66841
AT GRAND COULEE	54500	97	APR-JULY	51900	34933	43821	56169
	42700	97	APR-JUNE	39400	65970	32610	44036
COLUMBIA RIVER	71800	99	APR-SEPT	66300	44560	79386	72781
BL ROCK ISLAND	60900	99	APR-JULY	55600	58672	66629	61601
	47900	99	APR-JUNE	42200	69844	49348	48384
COLUMBIA RIVER	105000	104	APR-SEPT	107700	103682	118503	101000
AT THE DALLES	89600	104	APR-JULY	92700	88273	101631	86500
	72900	104	APR-JUNE	74600	70038	80122	70100
PEND OREILLE RIVER SYSTEM							
PEND OREILLE	15200	99	APR-SEPT	12980	12841	17721	15425
BL. BOX CANYON	14000	99	APR-JULY	11780	11482	16324	14156
	12100	99	APR-JUNE	9895	9226	13306	12227
KETTLE RIVER SYSTEM							
KETTLE RIVER	1920	105	APR-SEPT	2438	2709	2330	1829
NR LAURIER	1825	105	APR-JULY	2327	2534	2174	1738
	1660	105	APR-JUNE	2004	2251	1747	1581
COLVILLE RIVER	141	105	APR-SEPT		182	160	134
AT KETTLE FALLS	129	105	APR-JULY			161	123
	120	105	APR-JUNE		144	132	114

/1/ OBSERVER FLOW CORRECTED FOR STORAGE IN ANY OF THE FOLLOWING RESERVOIRS WHICH ARE ABOVE THE STATION: KOOTENAY LAKE, HUNGRY HORSE, FLATHEAD LAKE, PEND OREILLE LAKE, F.D. ROOSEVELT LAKE, LAKE CHELAN, COEUR D'ALENE LAKE, BROWNLEE, NOXON RESERVOIR AND PUMPAGE AT F. D. ROOSEVELT LAKE.

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET							
BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE- CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
-----							
SPOKANE RIVER SYSTEM							
SPOKANE RIVER	3190	112	APR-SEPT			2238	2848
AT POST FALLS/2/	3075	112	APR-JULY			2145	2754
OKANOGAN RIVER SYSTEM							
SIMILKAMEEN R.	1540	105	APR-SEPT	1214	1490	1638	1462
NR NIGHTHAWK	1433	105	APR-JULY	1116	1356	1491	1365
	1219	105	APR-JUNE	894	1155	1166	1161
OKANOGAN RIVER	1760	107	APR-SEPT	1688	2170	2046	1644
NR TONASKET	1600	107	APR-JULY	1492	1891	1712	1497
	1350	107	APR-JUNE	1179	1569	1306	1262
METHOW RIVER SYSTEM							
METHOW RIVER	1080	110	APR-SEPT	976	1354	1203	980
NR PATEROS	1000	110	APR-JULY	886	1243	1120	908
	850	110	APR-JUNE	722	1094	918	773
CHELAN RIVER SYSTEM							
CHELAN RIVER	1200	100	APR-SEPT	1079	1261	1376	1203
AT CHELAN /3/	1055	100	APR-JULY	946	1104	1223	1055
	826	100	APR-JUNE	688	901	958	826
STEHEKIN RIVER	877	102	APR-SEPT			938	860
AT STEHEKIN	740	102	APR-JULY		727	800	727
	564	102	APR-JUNE		572	603	553
ENTIAT RIVER	250	106	APR-SEPT		292	282	235
NR ARDENVOIR	226	106	APR-JULY		263	258	213
	182	106	APR-JUN		221	206	172
WENATCHEE RIVER SYSTEM							
WENATCHEE RIVER	1270	100	APR-SEPT				1270
NR PLAIN	1136	100	APR-JULY				1136
	900	100	APR-JUNE				899
WENATCHEE RIVER	1712	100	APR-SEPT	1541	1590	2013	1712
AT PESHAstin	1545	100	APR-JULY	1385	1432	1791	1545
	1240	100	APR-JUNE	1022	1191	1429	1237
STEMILT BASIN	*134	97	MAY-SEPT				**138
NR WENATCHEE							
ICICLE CREEK	370	100	APR-SEPT				**370
NR LEAVENWORTH	340	100	APR-JULY				**340
	270	100	APR-JUNE				**270
-----							
* THOUSANDS OF MINERS' INCHES.							
** AVERAGE COMPUTED FOR 1963-1977.							
/2/ FORECASTS MADE BY JERRY BEARD, SOIL CONSERVATION SERVICE, BOISE, IDAHO. OBSERVED FLOW CORRECTED FOR STORAGE IN COEUR D'ALENE LAKE.							
/3/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CHELAN.							



SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET							
BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE- CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
YAKIMA RIVER SYSTEM							
YAKIMA RIVER	138	99	APR-SEPT	133	109	152	139
NR MARTIN /4/	127	99	APR-JULY	123	96	138	128
	110	99	APR-JUNE	107	81	121	111
YAKIMA RIVER	905	96	APR-SEPT	917	733	1100	943
AT CLE ELUM /5/	820	96	APR-JULY	825	659	1010	854
	705	96	APR-JUNE	678	589	883	734
YAKIMA RIVER	1970	94	APR-SEPT	2069	2221	2434	2096
NR PARKER /6/	1784	94	APR-JULY	1779	1958	2193	1898
	1567	94	APR-JUNE	1491	1722	1909	1667
KACHESS RIVER	117	97	APR-SEPT	119	105	134	121
NR EASTON /7/	112	97	APR-JULY	108	96	126	115
	98	97	APR-JUNE	91	84	110	101
CLE ELUM RIVER	444	96	APR-SEPT	442	421	516	463
NR ROSLYN /8/	405	96	APR-JULY	397	381	468	422
	340	96	APR-JUNE	310	324	392	353
BUMPING RIVER	141	99	APR-SEPT	137	137	161	142
NR NILE /9/	128	99	APR-JULY	127	128	147	129
	106	99	APR-JUNE	102	109	123	107
AMERICAN RIVER	120	97	APR-SEPT			140	124
NR NILE	110	97	APR-JULY			130	113
	91	97	APR-JUNE			109	94
TIETON RIVER/10/	239	97	APR-SEPT	245			246
AT TIETON DAM	200	97	APR-JULY	198			207
"	160	97	APR-JUNE	149			165
NACHES RIVER	850	98	APR-SEPT	812	966	998	867
NR NACHES /11/	768	98	APR-JULY	732	881	945	784
	654	98	APR-JUNE	601	770	775	667
AHTANUM CREEK	46	98	APR-SEPT				47
NR TAMPICO /12/	42	98	APR-JULY				43
	36	97	APR-JUNE				37

- /4/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE KEECHELUS.
- /5/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, AND CLE ELUM LAKES AND DIVERSION BY KITTITAS CANAL.
- /6/ OBSERVED FLOW CORRECTED FOR STORAGE IN KEECHELUS, KACHESS, CLE ELUM, BUMPING, AND RIMROCK LAKES AND DIVERSIONS BY ROSA, UNION GAP, NEW RESERVATION, OLD RESERVATION AND SUNNYSIDE CANALS.
- /7/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE KACHESS.
- /8/ OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE CLE ELUM.
- /9/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING LAKE.
- /10/ OBSERVED FLOW CORRECTED FOR STORAGE IN RIMROCK LAKE.
- /11/ OBSERVED FLOW CORRECTED FOR STORAGE IN BUMPING AND RIMROCK LAKES AND DIVERSIONS BY TIETON, SELAH VALLEY, WAPATOX CANALS AND CITY OF YAKIMA.
- /12/ OBSERVED FLOW OF NORTH AND SOUTH FORKS (COMBINED).

SEASONAL STREAMFLOW IN THOUSANDS OF ACRE-FEET							
BASIN, STREAM AND STATION	FORECAST RUNOFF 1985	% 20-YR. AVG.	FORE- CAST PERIOD	1984	1983	1982	20-YR AVERAGE 61-80
-----							
LOWER COLUMBIA RIVER SYSTEM							
MILL CREEK	19.0	109	APR-SEPT		13.48	24.62	**17.50
AT WALLA WALLA	18.9	109	APR-JULY		13.39	24.48	**17.33
	18.7	109	APR-JUNE		13.36	21.63	**17.15
LEWIS RIVER	1320	106	APR-SEPT		1255	1170	1249
AT ARIEL /13/	1150	106	APR-JULY		1046	1030	1086
	1019	106	APR-JUNE		821	927	961
COWLITZ RIVER	2100	103	APR-SEPT	2080	1935	4936	2038
BL MAYFIELD DAM	1830	103	APR-JULY	1860	1754	1963	1778
/14/	1550	103	APR-JUNE	1570	1424	1722	1502
COWLITZ RIVER	2700	101	APR-SEPT	3770	2618	2655	2673
AT CASTLE ROCK	2346	101	APR-JULY	3370	2195	2363	2323
/14/	2000	101	APR-JUNE	2860	1739	2080	1980
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
DUNGENESS RIVER	155	97	APR-SEPT		197	196	160
NR SEQUIM	126	97	APR-JULY		158	163	130
	94	97	APR-JUNE		117	117	97
ELWHA RIVER SYSTEM							
ELWHA RIVER	536	97	APR-SEPT		538	607	**553
NR PORT ANGELES	440	97	APR-JULY		448	512	**454
PUGET SOUND							
SKAGIT RIVER SYSTEM							
SKAGIT RIVER	2530	100	FEB-AUG		1995	2248	**2532
AT NEWHALEM /15/	2355	100	APR-SEPT		1531	1880	**2356
	1970	100	APR-JULY		1061	1439	**1972
	1485	100	APR-JUNE		698	1004	**1485
GREEN RIVER SYSTEM							
GREEN RIVER BL	335	106	APR-SEPT		190	227	**316
HOWARD HANSEN DAM	300	106	APR-JULY		145	195	**284
/16/	270	105	APR-JUNE		107	174	**256
CEDAR RIVER SYSTEM							
CEDAR RIVER	95	102	APR-SEPT		66	80	**93
NR CEDAR FALLS							
-----							
/13/	OBSERVED FLOW CORRECTED FOR STORAGE IN LAKE MERWIN, YALE AND SWIFT RESERVOIRS.						
/14/	OBSERVED FLOW CORRECTED FOR STORAGE IN RIFFE LAKE AND MAYFIELD RESERVOIR.						
/15/	OBSERVED FLOW CORRECTED FOR STORAGE IN DIABLO, ROSS AND GORGE RESERVOIRS.						
/16/	OBSERVED FLOW CORRECTED FOR STORAGE IN HOWARD HANSON DAM.						

# COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of washington stream basins presents the water content of the snow about February 1, 1985, as percent of the same date in 1984 and 1983 and average of record.

Tributary Basin	No. of Courses	1985 Snow Water Expressed		
		1984	1983	1961-80 Ave.
<u>UPPER COLUMBIA BASIN</u>				
Pend Oreille	8	162	173	120
Kettle	6	82	107	33
Colville	1	173	239	163
Spokane	6	172	138	114
Okanogan	22	165	112	92
Methow	1	77	71	77
Chelan	5	102	104	31
Entiat	9	100	103	68
Wenatchee	8	147	142	102
Yakima	14	141	150	105
Ahtanum	2	125	189	121
<u>LOWER COLUMBIA BASIN</u>				
Mill Creek	2	219	- -	172
Cowlitz	1	125	134	102
<u>PUGET SOUND</u>				
White	1	- -	- -	102
Green	9	163	86	93
Snoqualmie	1	122	128	122
Skykomish	2	85	127	102
Skagit	13	187	172	88
Baker	8	136	128	90
<u>OLYMPIC PENNINSULA</u>				
Morse	1	122	127	97
Elwha	1	109	91	83
Dungeness	1	166	194	105



# RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE <u>1/</u> CAPACITY	1985	Measured (April)		
				1984	1983	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	18.4	183.6	168.5	225.0
Columbia	Franklin D. Roosevelt Lake	5232.0	4224.7	5058.7	5177.2	2565.6
Columbia	Banks Lake	714.9	774.8	697.70	709.6	406.2
Okanogan	Conconully Reservoir	13.0	13.0	13.0	11.5	9.1
Okanogan	Conconully Lake	10.5	10.4	10.4	10.4	9.4
Chelan	Lake Chelan	676.1	226.9	392.3	295.1	450.6
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	83.3	137.1	87.3	139.6
Kachess	Kachess Lake	239.0	149.0	188.8	199.8	217.1
Cle Elum	Lake Cle Elum	436.9	175.8	296.3	284.7	367.9
Bumping	Bumping Lake	33.7	3.8	17.2	6.2	25.4
Tieton	Rimrock Lake	198.0	92.1	151.6	137.8	160.2
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1404.1	880.5	1225.3	1045.1	1033.9
Skagit	Diablo Reservoir	90.6	84.2	83.9	83.5	86.1
Skagit	Gorge Reservoir	9.8	8.1	7.7	8.0	8.3

1/ Based on Active Storage  
 \* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	Fall		Winter	
	Sept-Oct Observed	1984 <u>2/</u> Departures	Nov. 1984 - Observed	Feb. 1985 <u>2/</u> Departures
Northeastern Wash	1.83	-0.65	6.97	+0.42
Southeastern Wash	2.22	-0.29	6.69	-0.24
East slope Cascade	3.24	-1.51	13.17	-6.76
North Central Wash	1.54	-0.05	4.00	-0.69
Northwest Cascade	11.98	-1.23	26.72	-11.14
Southwest Cascade	8.89	-4.59	19.26	-8.84

Northeastern Washington	- Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.
Southeastern Washington	- Touchet, Tucannon, and Palouse Drainages
East Slope Cascades	- Yakima, Wenatchee, and Chelan Drainages
North Central Washington	- Methow and Okanogan Drainages
Northwest Slope Cascades	- Puget Sound Drainages
Southwest Slope Cascades	- Lower Columbia Drainages

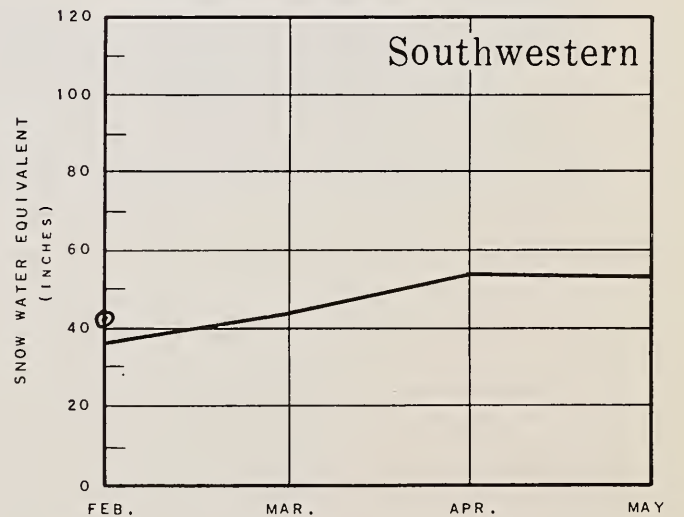
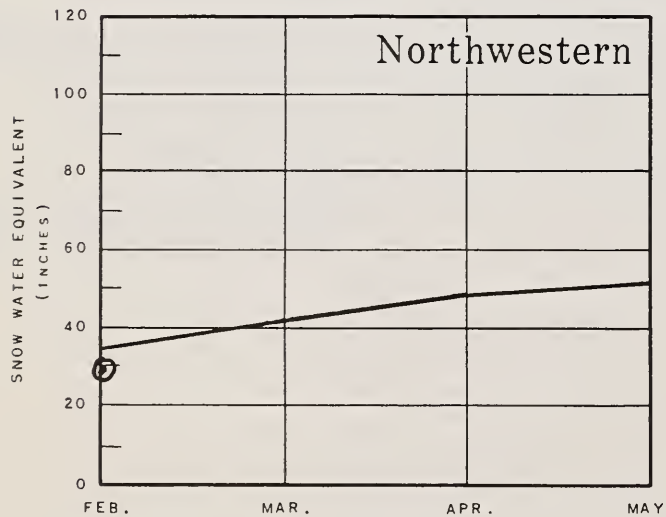
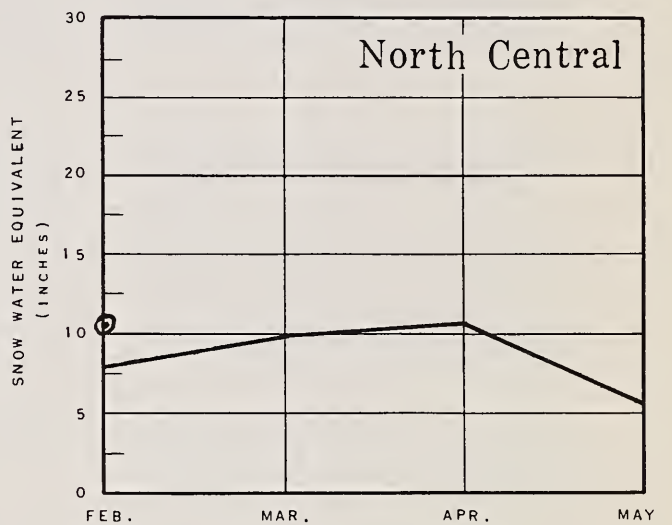
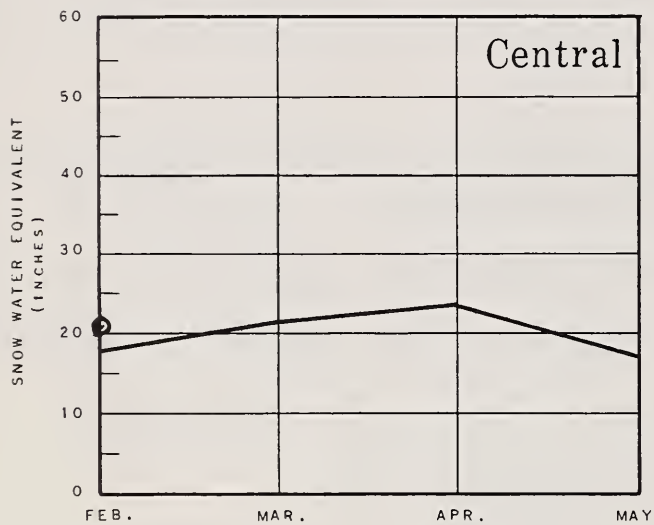
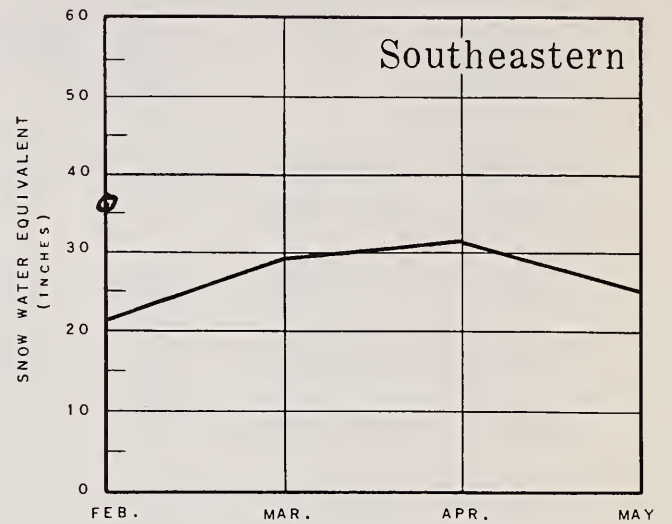
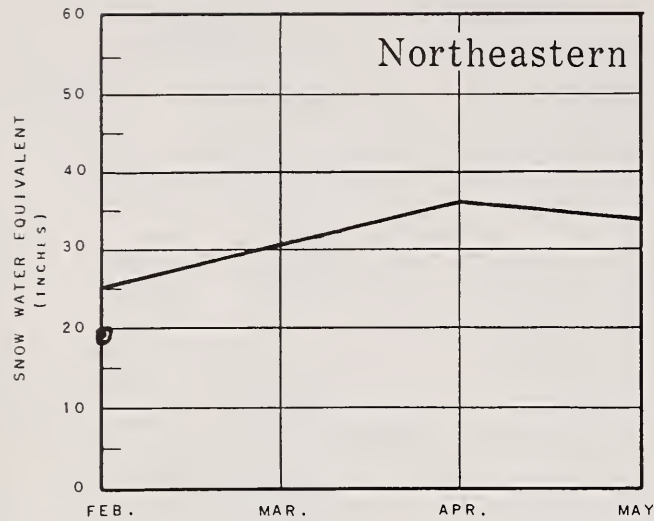
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and the National Weather Service

2/ - Departure from 15-year (1958-1972) drainage division average

# WASHINGTON SNOW COVER

1985

## DRAINAGE AREAS



**Average** ———  
**1985**      - - - -

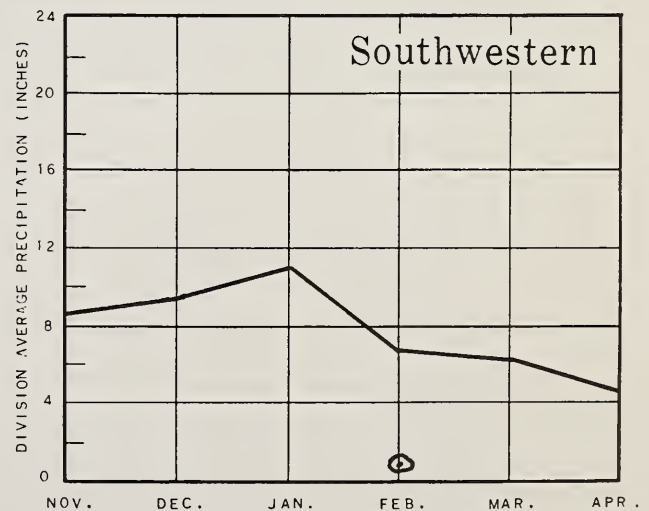
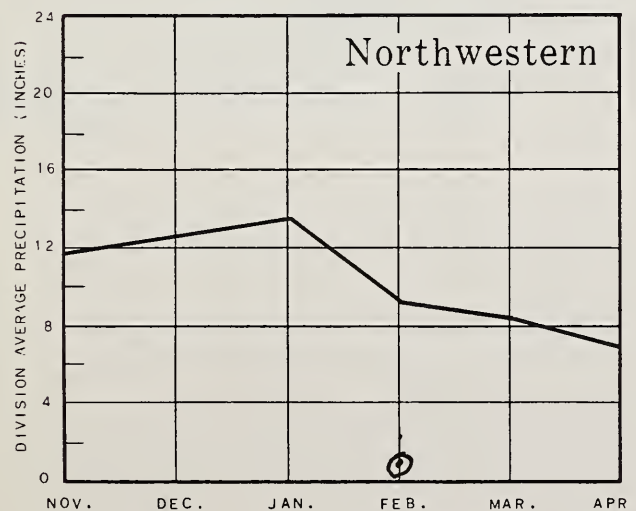
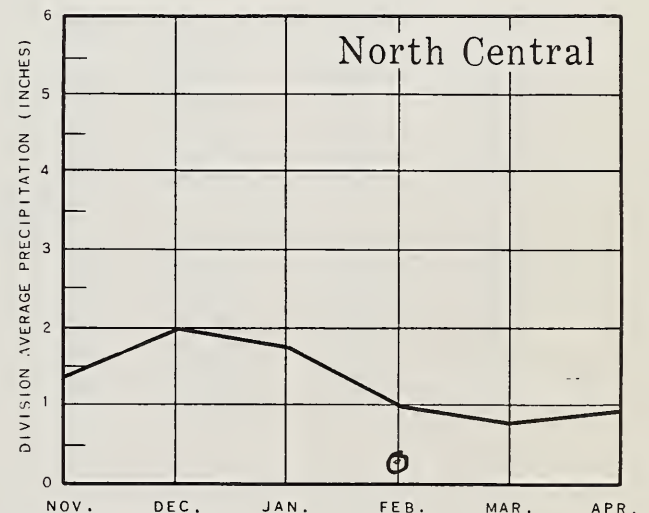
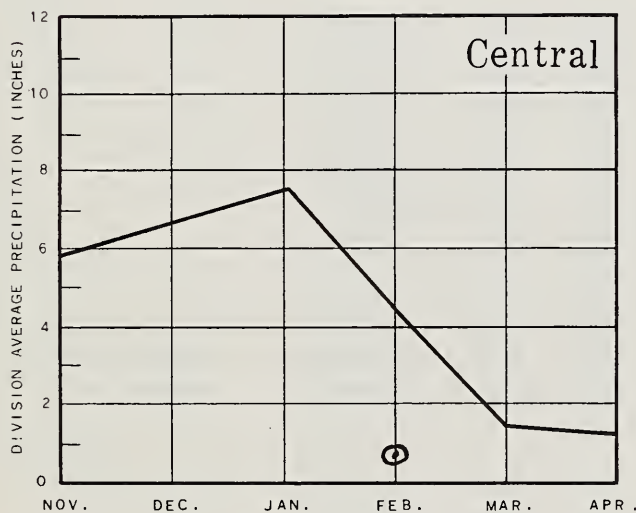
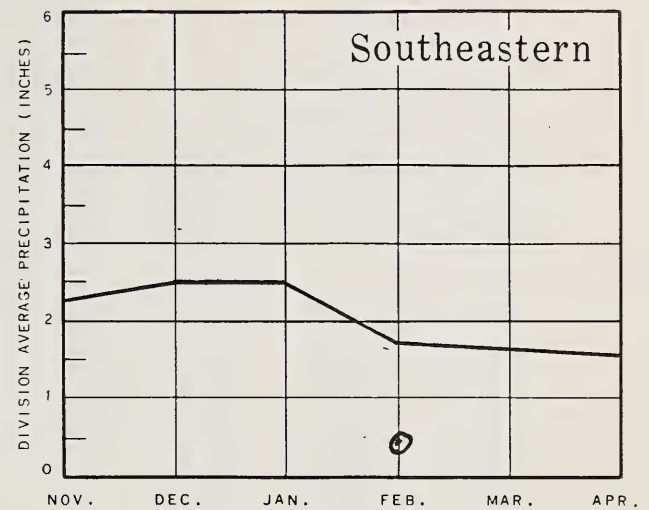
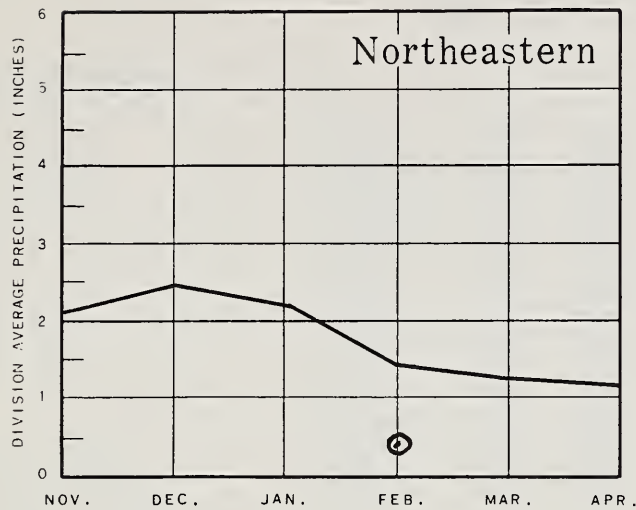
*Selected Snow Survey Courses by Soil Conservation Service*



# WASHINGTON VALLEY PRECIPITATION

1985

## DRAINAGE AREAS



**Average** ———  
**1985** -----

*Preliminary Analysis by National Weather Service*



## SNOW DATA TO FEB. 1, 1985 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

UPPER COLUMBIA DRAINAGEPEND OREILLE RIVER

Benton Meadow	16A02	2344	1/25	21	12.1	0.0	12.6
Benton Spring	16A03	4900	1/25	47	16.6	9.5	13.5
Boyer Mtn	17A02	5250	1/25	54	18.4		18.9
Bunchgrass Meadow	17A01	5000	1/31	62	22.4		10.0
Chewelah	17A04	4925	Not Measured				
Hoodoo Basin	15C10	6000	2/01	102	42.0	26.2	34.8
Hoodoo Creek	15C01	5900	2/01	97	37.3	24.6	32.4
Lookout	15B02	5250	1/30	82	28.0	15.0	24.6
Nelson	2D04CA	3050	1/01	40	13.3	6.7	11.3
Schweitzer Bowl	16A06	4500	2/01		22.7E	15.8	21.6
Schweitzer Ridge	16A05	6100	2/01		30.7E	23.1	32.9

KETTLE RIVER

Barnes Creek	2B06CA	5300	1/29	43	13.5	13.1	13.8
Big White Mtn.	2E03CA	5500	2/02	39	10.6	12.9	13.4
Butte Creek	18A03	4070	1/27	28	8.0	8.0	6.7
Carmi	2E02CA	4100	2/03	17	2.6	4.6	5.1
Farron #1	2B02CA	4000	1/31	33	10.6	9.9	17.6
Farron #2	2B02ACA	4000	not measured				
Goat Creek	18A04	3595	1/27	22	6.3	4.9	5.4
Monashee Pass	2E01CA	4500	1/29	33	9.2	7.9	9.4
Summit G.S.	18A05	2150	1/27	23	6.6	6.0	5.7
Trapping Creek Lower	2E05CA	3050	2/03	14	1.5	4.6	4.3
Trapping Creek Upper	2E04CA	4450	2/02	23	4.6	7.3	7.2

COLVILLE RIVER

Baird	17A06	3215	1/27	32	9.3	5.4	5.7
Chewelah	17A04	4925	not measured				
Togo	18A10	3370	"	"			

# Average based on 1961-1980 averages  
sp SNOTEL data



## SNOW DATA TO FEB. 1, 1985 - APPENDIX 2

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

SPOKANE RIVER

Above Burke	15B08	4100	1/30	60	18.4	9.0	14.8
4th of July Summit	16B03	3100	1/31	76	23.0	13.2	19.9
Lookout	15B02	5250	1/30	82	28.0	15.0	24.6
Mosquito Ridge	16A04	5110	1/31	82	28.8	18.2	25.8
Sherwin	16C01	3200	2/01		12.6E	8.3	10.5
Sunset	15B09A	5600	2/01	64	21.7	13.2	23.0
Lost lake	15B14A	6000	1/31	130	46.1	26.8	38.0

NEWMAN LAKE

Ragged Ridge	17B02	3333	1/29	34	11.0	3.4	1.0
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OKANOGAN RIVER

Aberdeen Lake	1F01CA	4300	1/30	18	4.3	4.7	5.0
Blackwall Peak	2G03CA	6250	1/31	60	19.8	17.5	24.7
Brenda Mine	2F18CA	4800	1/30	31	9.4	8.5	9.4
Brookmere	1C01CA	3200	1/31	22	6.8	3.8	6.9
Enderby	1F04CA	6250	1/30	68	25.9	26.4	25.2
Esperon Creek Lower	2F15CA	4400	Not Measured				
Esperon Creek Middle	2F15CA	4700	"	"			
Esperon Creek Upper	2F13CA	5400	"	"			
Grayback Reservoir	2F08CA	5225	1/23	23	5.2	7.0	6.2
Hamilton Hill	2G06CA	4900	1/29	31	10.6		
Harts Pass	20A05A	6500	1/28	70	24.7	23.7	32.1
Isintok Lake	2F11CA	6300	1/26	16	3.9	3.1	5.9
Lost Horse Mountain	2G04CA	7000	1/31	28	6.2	3.5	6.9
McCulloch	2F03CA	4200	1/30	19	4.8	4.6	5.0
Missezula Mtn.	2G05CA	5100	1/28	26	7.5	3.5	7.1
Mission Creek	2F05CA	6000	2/04	41	12.8	13.2	13.6
Monashee Pass	2E01CA	4500	1/29	33	9.2	7.9	9.4
Mount Kobau	2F12CA	5960	1/27	32	8.5	9.4	8.1

# Average based on 1961-1980 averages  
s SNOTEL data

## SNOW DATA TO FEB. 1, 1985 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

OKANOGAN RIVER (CONT.)

Mutton Creek No. 1	19A01	5700	Not Measured				11.8
Mutton Creek No.2 SP	19A11	6000	" "				New
Nickel Plate	2G02CAN	6200	1/30	20	5.7		
Oyama Lake	2F19CAN	4400	1/30	" 20	5.4	3.9	5.2
Postill Lake	2F07CAN	4500	1/30	23	5.3	5.9	5.9
Rusty Creek	19A03	4000	Not Measured				
Salmon Meadows	19A02	4500	" "				
Silver Star Mountain	2F10CAN	6050	1/27	56	20.3	18.1	19.2
Summerland Reservoir	2F02CAN	4200	1/26	22	6.7	5.9	7.3
Sunday Summit	2G01CAN	4300	1/30	20	5.5	2.0	5.0
Trout Creek	2F01CAN	4700	1/31	20	5.2	3.5	5.9
Vaseux Creek	2F20CAN	4600	1/31	20	3.8	3.9	4.5
White Rocks Mountain	2F09CAN	6000	2/01	45	15.3	16.9	16.0

METHOW RIVER

Harts pass	20A05A	6500	1/28	70	24.7	23.7	32.1
Mutton Creek NO. 1	19A01	5700	Not Measured				
Mutton Creek No. 2 SP	19A11	6000	" "				
Rusty Creek	19A03	4000	" "				
Salmon Meadows	19A02	4500	" "				

CHELAN LAKE BASIN

Cloudy Pass +	20A22	6500	1/29	18	6.1		29.7
Lyman Lake	20A23	5900	1/29	92	36.4	44.4	39.8
Little Meadows +	20A24a	5275	1/29	76	27.4		30.3
Mirror Lake	30A39	5600	1/29	58	19.2	19.5	10.0
Park Creek Ridge	20A12	4600	2/01		29.0sp	0.0	36.0
Rainy Pass	20A09	4780	1/29	67	22.2		

# Average based on 1961-1980 averages

+ Aerial stadia observation

sp SNOTEL data

## SNOW DATA TO FEB. 1, 1985 - APPENDIX 4

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average *

ENTIAT RIVER

Brief	20B19	1600	1/31	17	4.0	4.5	6.8
Entiat Meadows +	20A33	4540	1/30	68	23.8	21.4	33.2
Entiat River Trail +	20A34	3325	1/30	45	13.0	12.2	18.5
Fox Camp +	20A36	6510	1/30	54	16.2	20.1	41.3
Pope Ridge	20B20	3450	1/30	40	11.6	11.2	14.7
Pugh Ridge +	20A32	6725	1/30	39	12.9	15.2	27.6
Shady Pass	20A37	6200	1/30	45	15.6	17.8	20.1
Snow Brushy +	20A35	3910	1/30	90	33.3	20.2	28.4
Tommy Creek +	20B21	4900	1/30	44	12.8	9.9	20.6

WENATCHEE RIVER

Berne Mill Creek	21B23	3170	1/30	56	20.1	14.0	20.8
Berne Mill Creek SP	21B41	3240	1/30	57	20.8		19.4
Blewett Pass No. 2	20B02	4270	1/28	31	10.4	17.7	12.6
Chiwaukum G. S.	20B16	1810	1/30	24	6.3	.0	10.0
Lake Wenatchee	20B05	1970	Watershed Logged				Discontinued
Lyman Lake	20A23	5900	1/31		37.1sp	44.4	39.8
Merritt	20B18	2140	1/30	34	11.6	4.9	1.0
Stevens Pass	21B01	4070	1/30	89	37.2	26.8	36.0
Stevens Pass Sand Shed	21B45	3700	1/30	66	26.3	18.4	25.9

COLOCKUM CREEK

Trough #2(SP)	20B25	5310	2/01	26	6.5gt	0.0	
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+ Aerial stadia observation

# Average based on 1961-1980 averages

sp SNOTEL data



## SNOW DATA TO FEB. 1 , 1985 - APPENDIX 5

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

SQUILCHUCK CREEK

Beehive Springs	20B03	4400	2/01	19	4.7		6.5
Scout-a-Vista	20B04	3400	not measured				

STEMILT CREEK

Stimelt Slide	20B06	5000	2/01	31	8.4	9.6	10.8
Upper Wheeler	20B07	4400	2/01	23	6.1		

YAKIMA RIVER

Ahtanum R.S.	21C11	3100	1/28	20	5.4	5.5	6.1
Big Boulder Creek	21B09	3200	1/29	44	14.9	12.8	
Blewet Pass No. 2	20B02	4270	1/28	31	10.4	17.7	12.6
Bumping Lake Old	21C08	3450	1/31	35	11.0	9.0	12.3
Bumping Lake New	21C36	3400	1/31	42	13.5	10.3	15.5
Cayuse Pass	21C06	5300	1/26	138	57.9		56.3
Colockum Pass	20B09	5370	1/30	35	10.9	13.4	10.0
Corral Pass	21B13	6000	not measured				
Fish Lake	21B04	3371	1/29	62	22.4	20.1	
Green Lake	21C10	6000	1/28	62	26.5	20.5	20.1
Grouse Camp	20B11	5385	1/28	32	10.1	11.1	12.0
Lake Cle Elum	21B14	2200	1/30	23	6.2	2.2	7.8
Morse Lake	21C17	5400	1/31		31.4sp		37.4
Olallie Meadows	21B02	3625	1/31	78	33.0		10.0
Stampede Pass	21B10	3860	1/31		32.9sp	25.8	30.1
Tunnel Avenue	21B08	2450	1/30	39	12.7	8.6	16.8
White Pass E. Side	21C28	4500	2/01	56	17.4	15.0	17.3

# Average based on 1961-1980 averages

sp SNOTEL Reading

## SNOW DATA TO FEB. 1, 1985 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	1/28	20	5.4	5.5	6.1
Green Lake	21C10	6000	1/28	62	26.5	20.5	20.1

LOWER COLUMBIA DRAINAGEMILL CREEK

High Ridge SP	18D19	4890	1/30	66	22.8sp	0.0	
Touchet # 2 SP	17C55	5530	1/30	84	32.9	15.0	19.1

COWLITZ RIVER

Cayuse Pass	21C06	5300	1/26	138	57.9		56.3
White Pass E. Side	21C28	4500	2/01	56	17.4	15.0	17.3

PUGET SOUND DRAINAGEWHITE RIVER

Cayuse Pass	21C06	5300	1/26	138	57.9		56.3
Corral Pass	21B13	6000	Not Measured				
Morse Lake	21C17	5400	"	"			

GREEN RIVER

Airstrip	21B24	1800	1/30	6	2.0	0.0	4.6
Charley Creek	21B25	1200	1/30	3	0.6	0.0	1.2
Cougar Mountain	21B42	3200	5/30			0.0	14.5
Grass Mtn. No. 2	21B27	2900	1/30	32	10.5	0.0	13.2
Grass Mtn. No. 3	21B28	2100	1/30	13	3.8	0.0	4.3
Lester Creek	21B29	3100	1/30	52	15.6	8.2	16.2
Lynn Lake	21B50	4000	1/30	63	23.6	5.2	15.6
Sawmill Ridge	21B31	4700	1/30	61	19.6	15.2	25.9
Stampede Pass	21B10	3860	Not Measured				
Twin Camp	21C30	4100	1/30	60	20.0	10.6	17.3

# Average based on 1961-1980 averages  
sp SNOTEL Reading

## SNOW DATA TO February 1, 1985 - APPENDIX 7

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

SNOQUALMIE RIVER

Olallie Meadows ES	21B02	3960	1/31	78	33.0		10.0
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SKYKOMISH RIVER

Stevens Pass	21B01	4070	2/01		36.8S	26.8	36.0
Stevens Pass Sand Shed	21B45	3700	1/30	66	26.3	18.4	25.9

SKAGIT RIVER

Beaver Creek Trail	21A04	2200	1/29	29	8.2	4.1	11.3
Beaver Pass	21A01	3680	1/29	54	18.2	13.3	21.9
Brown Top Ridge	21A28	6000	1/28	97	37.6	34.6	43.9
Devils Park	20A04	5900	1/28	71	25.4	18.6	32.5
Freezeout Creek Trail	20A01	3500	1/28	34	10.2	4.5	10.3
Freezeout Meadow	20A38	5040	1/28	51	18.7	13.0	25.4
Granite Creek	21A29	3500	1/29	42	12.6	8.2	10.0
Harts Pass	20A05A	6500	1/28	70	24.7	23.7	32.1
Klesilkwa	3D03ACA	3710	1/28	27	8.7	3.2	9.7
Lightning Lake	3D02CAN	4000	Not Measured				
Lyman Lake	20A23	5900	1/29	92	36.4	44.4	39.8
Meadow Cabins	20A08	1900	1/28	16	4.8	3.0	1.0
New Hozomeen Lake	21A30	2800	1/28	29	8.0	3.0	9.5
Rainy Pass Snotel	20A09	4780	Not Measured				
Thunder Basin	20A07	4200	1/28	46	15.0	4.6	1.0

# Average based on 1961-1980 averages  
sp SNOTEL data



## SNOW DATA TO February 1, 1985 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

BAKER RIVER

Dock Butte +	20A11A	3800	1/02/85	100	40.0	33.0	44.4
Easy Pass +	21A07A	5200	" "	120	48.0	33.0	54.7
Jasper Pass +	21A06A	5400	" "	120	48.0	47.0	63.0
Martin Lake	21A09A	3600	" "	120	48.0	39.0	51.9
Mt. Blum +	21A18A	5800	" "	86	34.0	34.0	44.3
Rocky Creek	21A12A	2100	" "	60	24.0	5.0	22.6
Schreibers Meadow	21A10A	3400	" "	84	34.0	21.0	38.5
S.F. Thunder Creek +	21A14A	2200	" "	10	4.0	.0	8.1
Watson Lakes	21A08A	4500	" "	113	45.0	27.0	41.3

OLYMPIC PENINSULA DRAINAGEDUNGENESS RIVER

Deer Park	23B04	5200	1/28	40	14.7	8.9	14.0
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MORSE CREEK

Cox Valley	23B14	4500	1/29	72	25.8	21.1	26.7
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ELWHA RIVER

Hurricane	23B03	4500	1/30	36	12.1	11.2	14.6
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WYNOOCHEE RIVER

Carrol Pass	23B15	3650	1/30	58	21.6		
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+ Aerial stadia observation

# Average based on 1961-1980 average

## SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 1

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average *

PEND OREILLE RIVER

Bunchgrass Meadows	17A01	5000	01/31/84	62	22.4		10.0
	GT						
			01/31		19.7	12.5	17.7

OKANOGAN & METHOW RIVERS

Harts Pass	20A05	6500	01/28	70	24.7	23.7	32.1
	GT						
			01/31		29.2	31.4	25.8
Salmon Meadows	19A02	4500	Not Measured				
			01/31		11.4	17.1	12.9

CHELAN LAKE BASIN

Lyman Lake	20A23	5900	12/84		34.6	30.8	31.0
	GT						
			01/31		37.1		42.8
Mirror Lake	20A39	5600	12/31		18.2	18.5	18.6
	GT						
			01/31		19.1		21.5
Park Creek Ridge	20A12	4600	12/31		30.7	17.8	17.2
	GT						
			01/31		29.0		26.1
Rainy Pass	20A09	4780	12/27		23.0	11.5	13.4
	GT						
			01/31			27.4	25.3

ENTIAT RIVER

Pope Ridge	20B20	3450	12/31		12.0	11.6	10.9
	GT						
			01/31		12.8	12.9	15.6

WENATCHEE RIVER

Blewett Pass	20B02	4270	12/30		11.2	14.8	10.9
	GT		01/28	36	11.4		
			01/31		12.6	13.0	14.9
Lyman Lake	20A23	5900	12/31		34.6	30.8	31.0
	GT						
			01/31		37.1	43.3	42.8
Stevens Pass	21B01	4070	12/31		34.1	20.2	12.2
	GT						
			01/31		36.6	25.5	18.3
Trough # 2	20B25	5300	12/31		6.4	7.7	7.0
	GT						
			01/31		6.8	1.0	6.8

GT = Ground Truth measurement at SNOTEL site

## SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 2

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

COLOCKUM CREEK

Trough # 2	20B25	5300	12/31		6.4	7.7	7.0
	GT		01/30		6.8	1.0	6.8

STEMILT CREEK

Upper Wheeler	20B07	4400	12/31		6.9	9.6	8.5
	GT		01/31		7.3	9.1	12.6

YAKIMA RIVER

Big Boulder Creek	21B09	3200	DISCONTINUED				
Bumping Ridge	21C38	4600	12/30		19.7	20.8	7.7
	GT		01/31		20.6	21.3	11.4
Corral Pass	21B13	6000	12/31				
			01/31				
Fish Lake	21B04	3371	12/31		20.4	17.7	17.7
	GT		01/31		22.8	20.1	20.3
Green Lake	21C10	6000	12/31		10.3	12.4	12.9
	GT		01/31		10.8	12.4	17.9
Grouse Camp	20B11	5385	12/31		10.6.	13.7	8.6
	GT		01/28	39	12.4		
			01/30		0.0	12.0	15.6
Morse Lake	21C17	5400	12/31		27.2	27.5	28.8
			01/31		30.6	32.9	32.4
White Pass E. Side	21C28	4500	12/31		16.0	14.8	12.7
	GT		01/31		17.1	16.3	18.4

GT = Ground Truth measurement at SNOTEL site



## SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 3

## SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average

AHTANUM CREEK

Green Lake	21C10	6000	12/31		10.3	12.4	12.9
	GT		01/31		10.8	12.4	17.9

TOUCHET RIVER

Touchet # 2	17C5	5530	12/31		33.9	13.4	11.7
	GT		01/31	84	32.9		
			01/31		35.3	15.0	19.1

LEWIS RIVER

June Lake	22C09	3200	12/31		11.3	5.4	5.3
	GT		01/31		25.3		
Lone Pine Shelter	21C26	3800	12/31		27.1	21.0	13.5
	GT		01/31		28.9		24.0
Plains of Abraham	22C01	4400	12/31		45.8	44.5	30.7
			01/31		51.5	40.0	42.5
Sheep Canyon	22C10	4050	12/31		33.4	19.8	16.4
			01/31		34.4	19.2	18.7
Spencer Meadow	21C20	3400	12/31			12.3	14.7
			01/31			12.4	16.9
Surprise Lake	21C13	4250	12/31		46.8	28.7	20.3
	GT		01/31		52.7	33.6	30.2

COWLITZ RIVER

Pigtail Peak	21C33	5900	12/31		41.0	25.8	23.9
	GT		01/30	94	35.5		
			01/31		42.6	29.5	33.4
Potato Hill	21C14	4500	12/31		21.8	14.0	13.5
	GT		01/29		23.8	14.2	17.3
Sheep Canyon	22C10	4050	12/31		33.4	19.8	16.4
			01/31		34.4	19.2	18.7
Strawberry Landing	22C08	3280	12/31		37.9		16.9
	GT		01/31		39.4		25.7
Steppes PC	22C11		12/5				
Spirit PC	22C12		5/15				
			5/30				

GT = Ground Truth measurement at SNOTEL sites

## SNOTEL READINGS, FEB. 1, 1985 - APPENDIX 4

**SNOW**

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average *

NISQUALLY RIVER

Paradise Park	21C35	5500	12/31		47.4	42.2
			01/31		49.0	49.1

WHITE RIVER

Corral Pass	21B13	6000	12/31		11.6	12.7
	GT					

Morse Lake	21C17	5400	12/31		27.2	27.5
	GT					
			01/31		30.6	32.9

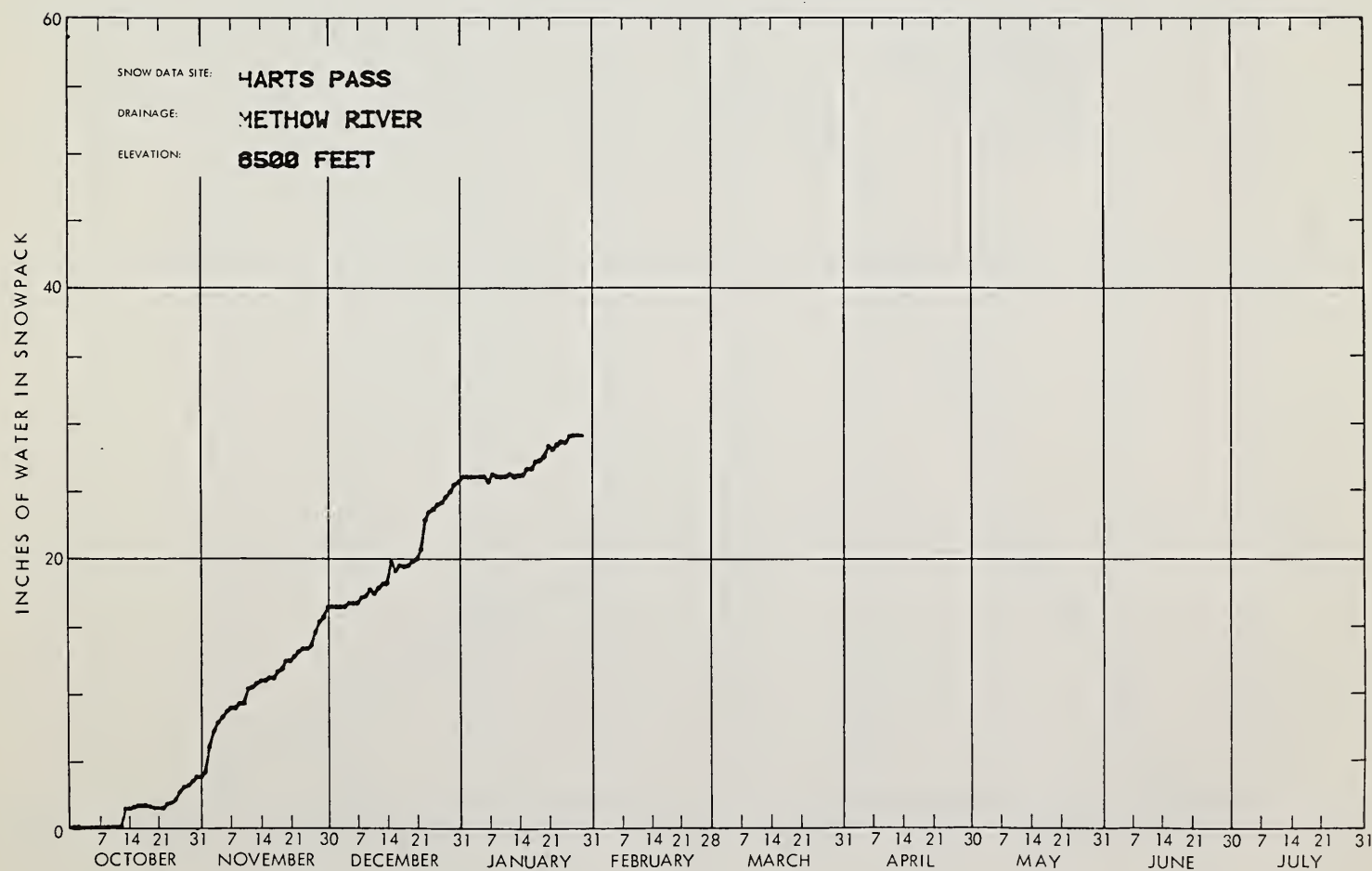
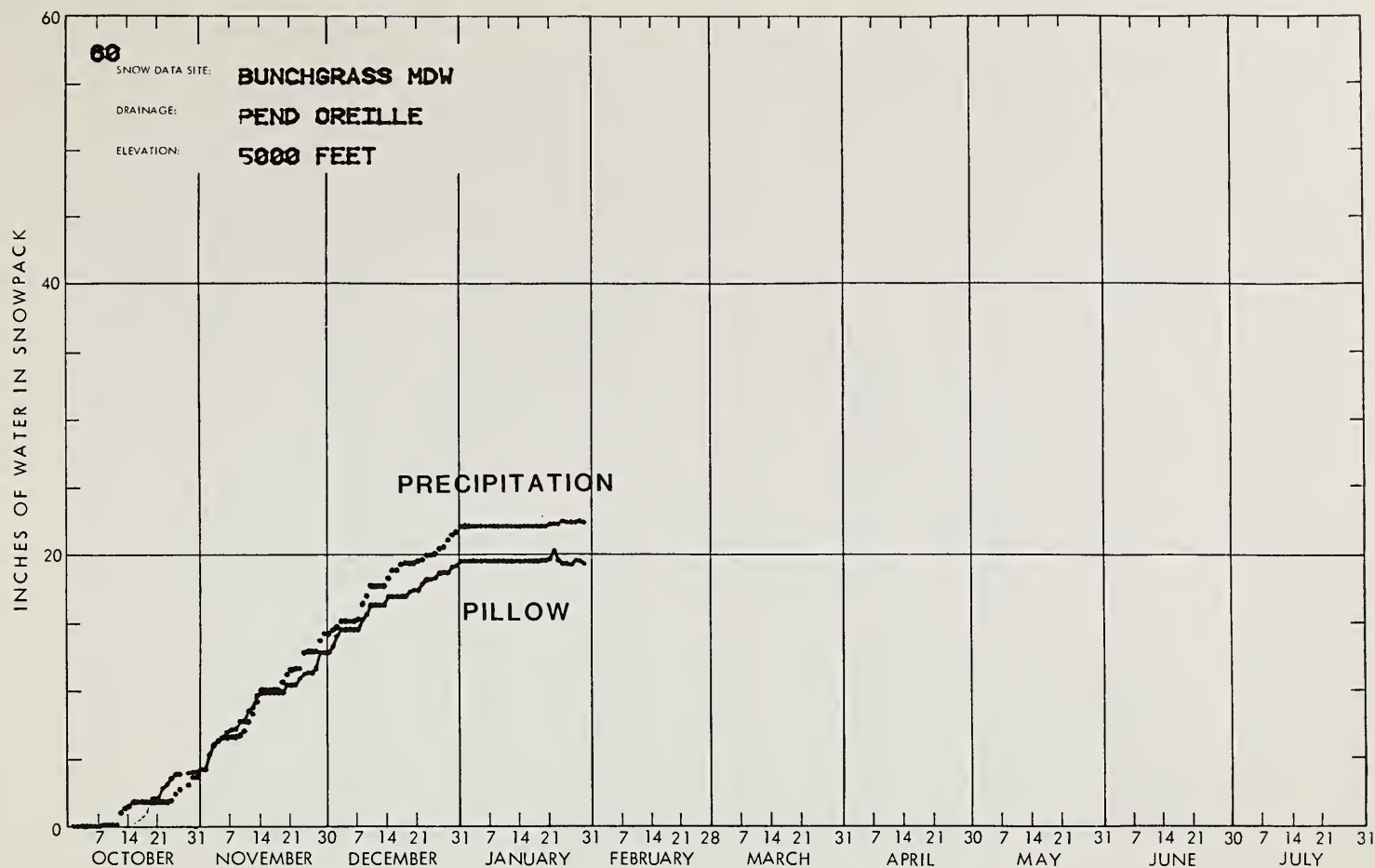
GREEN RIVER

Cougar Mountain	21B42	3200	12/31			14.5	10.5
	GT						
			01/31			11.0	13.3
Stampede Pass	21B10	3960	12/31		30.2	24.4	19.7
	GT						
			01/31		32.9	27.1	32.8

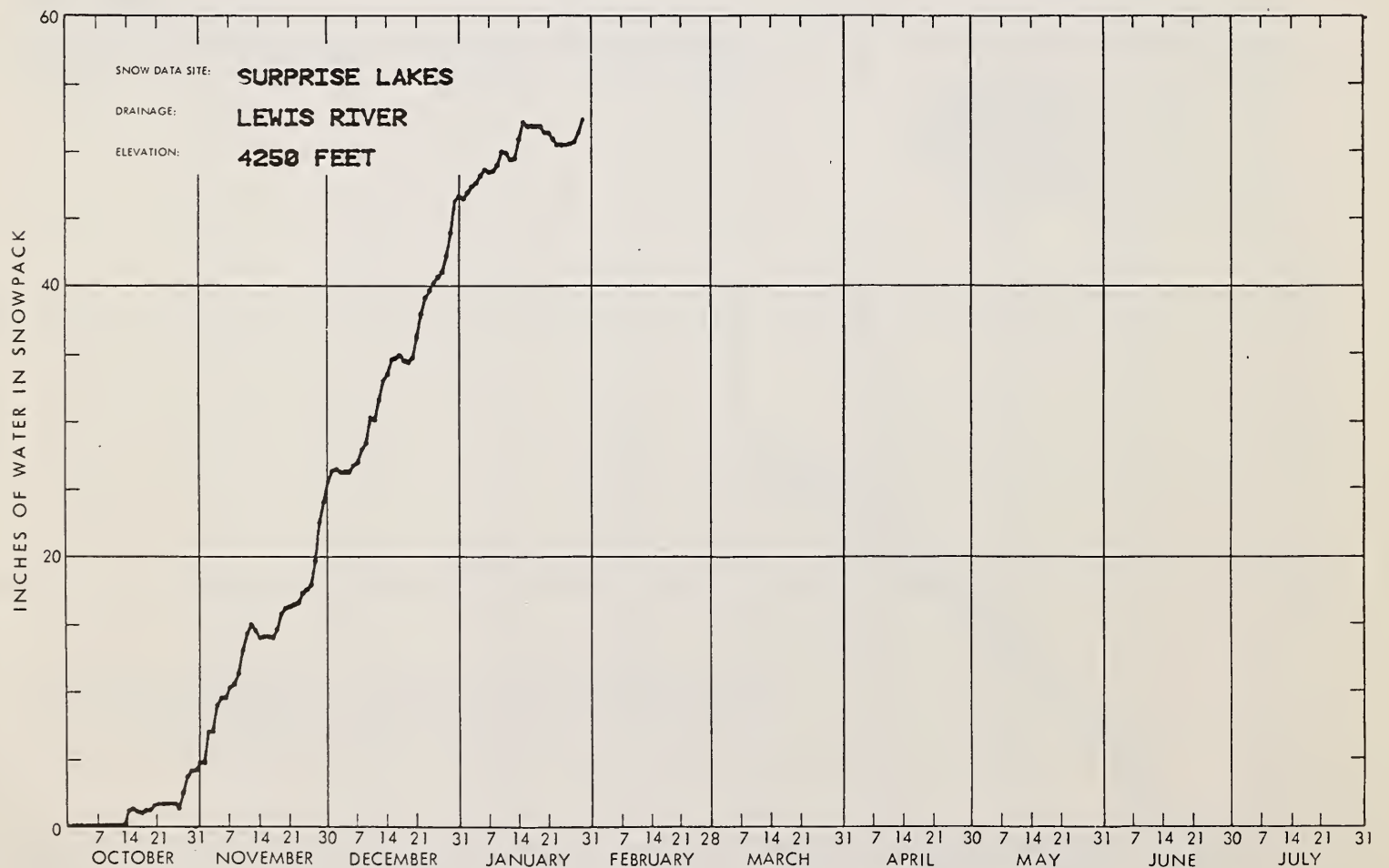
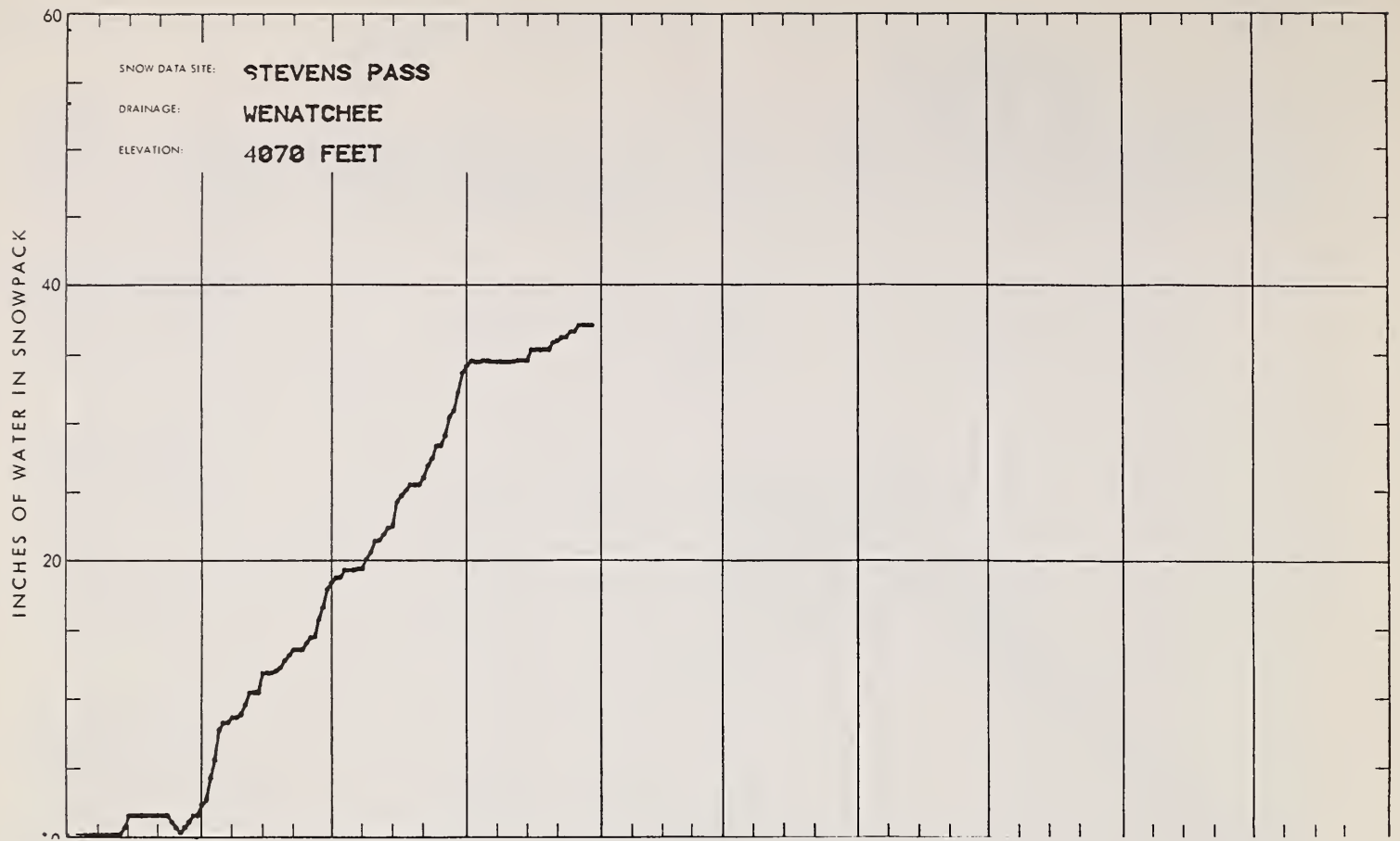
SNOQUALMIE RIVER

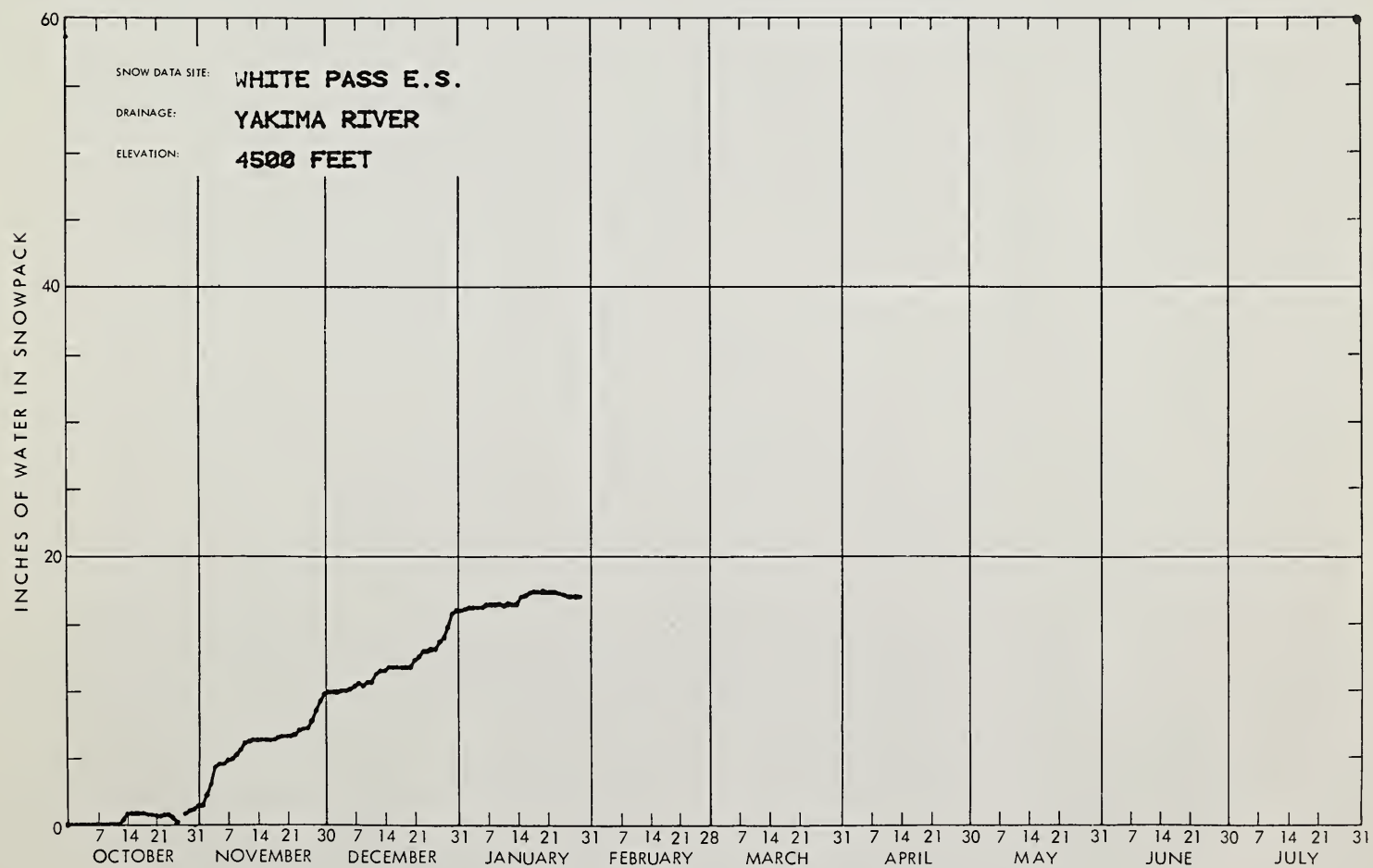
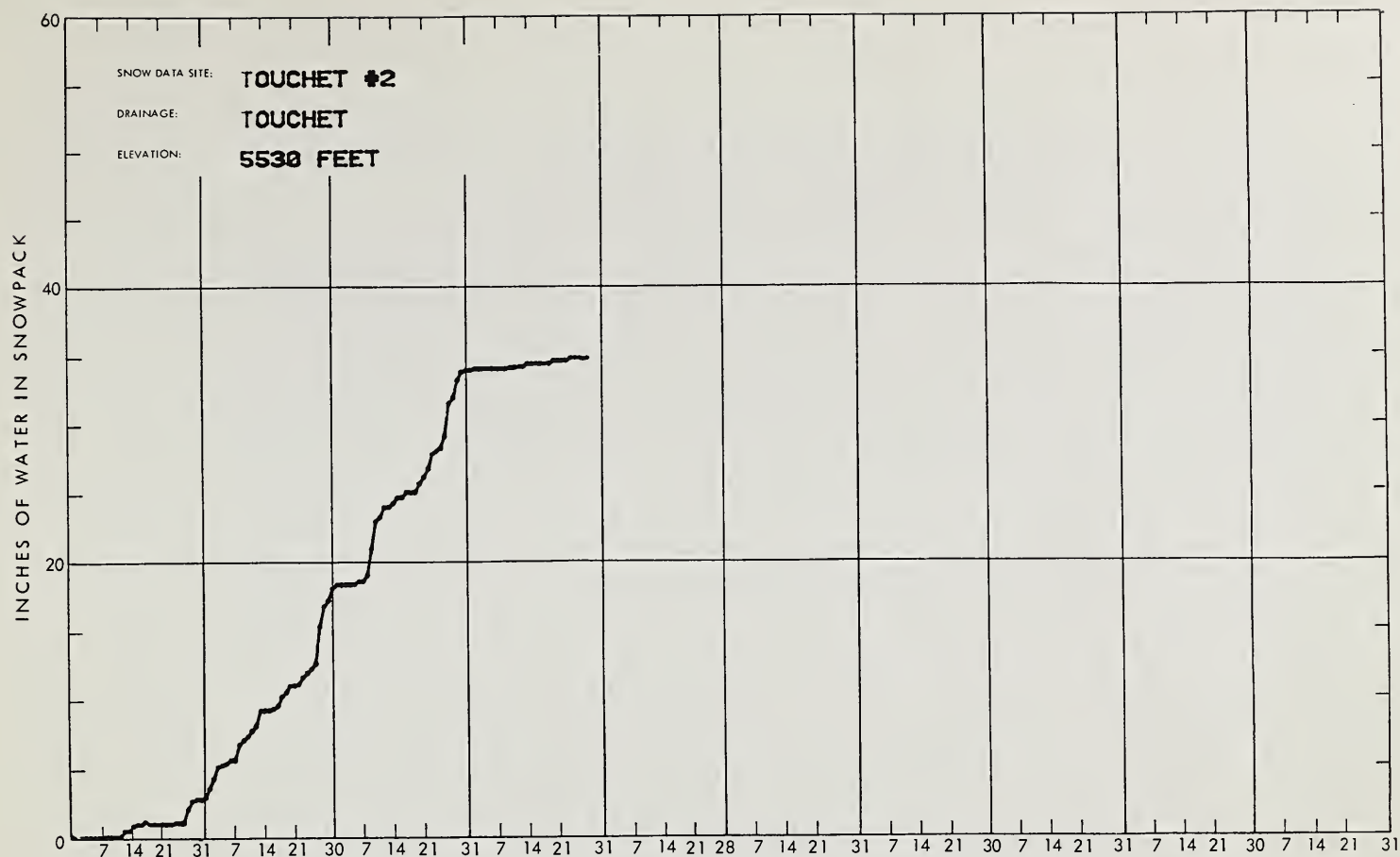
Olallie Meadows East	21B55	3960	12/31				24.6
			01/31				33.7

GT = Ground Truth measurements at SNOTEL sites













# Agencies Assisting with Snow Surveys

## GOVERNMENT AGENCIES

### Canada:

Ministry of the Environment, Water  
Investigations Branch, Victoria, British Columbia

### States:

Washington State Department of Ecology  
Washington State Department of Natural Resources

### Federal:

Department of the Army  
Corps of Engineers  
U.S. Department of Agriculture  
Forest Service  
U.S. Department of Commerce  
NOAA, National Weather Service  
U.S. Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Geological Survey  
National Park Service

## PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.  
Pacific Power and Light Company  
Puget Sound Power and Light Company  
Washington Water Power Company

## OTHER PUBLIC AGENCIES

Okanogan Irrigation District  
Wenatchee Heights Irrigation District

## MUNICIPALITIES

City of Tacoma  
City of Seattle

*Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.*

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